

ABSTRACT OF THE DISCLOSURE

A method for forming scribed grooves on a wafer and an apparatus for implementing the method. The method moves the cutting part such that its cutting edge forms an inverted trapezoid-shaped path, thereby reducing the scribing angle of the cutting edge to an acute angle. Consequently, the stress produced by the mechanical shock at the time of the scribing can be dispersed in the moving direction of the cutting edge and in a direction perpendicular to the surface of the wafer. The horizontal movement of the scribing cutting edge in the wafer enables the application of a sufficient load in a direction perpendicular to the scribing plane in the wafer. Consequently, vertical cracks are sufficiently generated, and the amount of dimensional deviation between the scribed groove and the cleaved plane is reduced. This method can produce chips featuring outside dimensions with higher precision and cleaved surfaces with high-quality mirror finish.